



Data Usage, Lean Thinking and Process Improvement

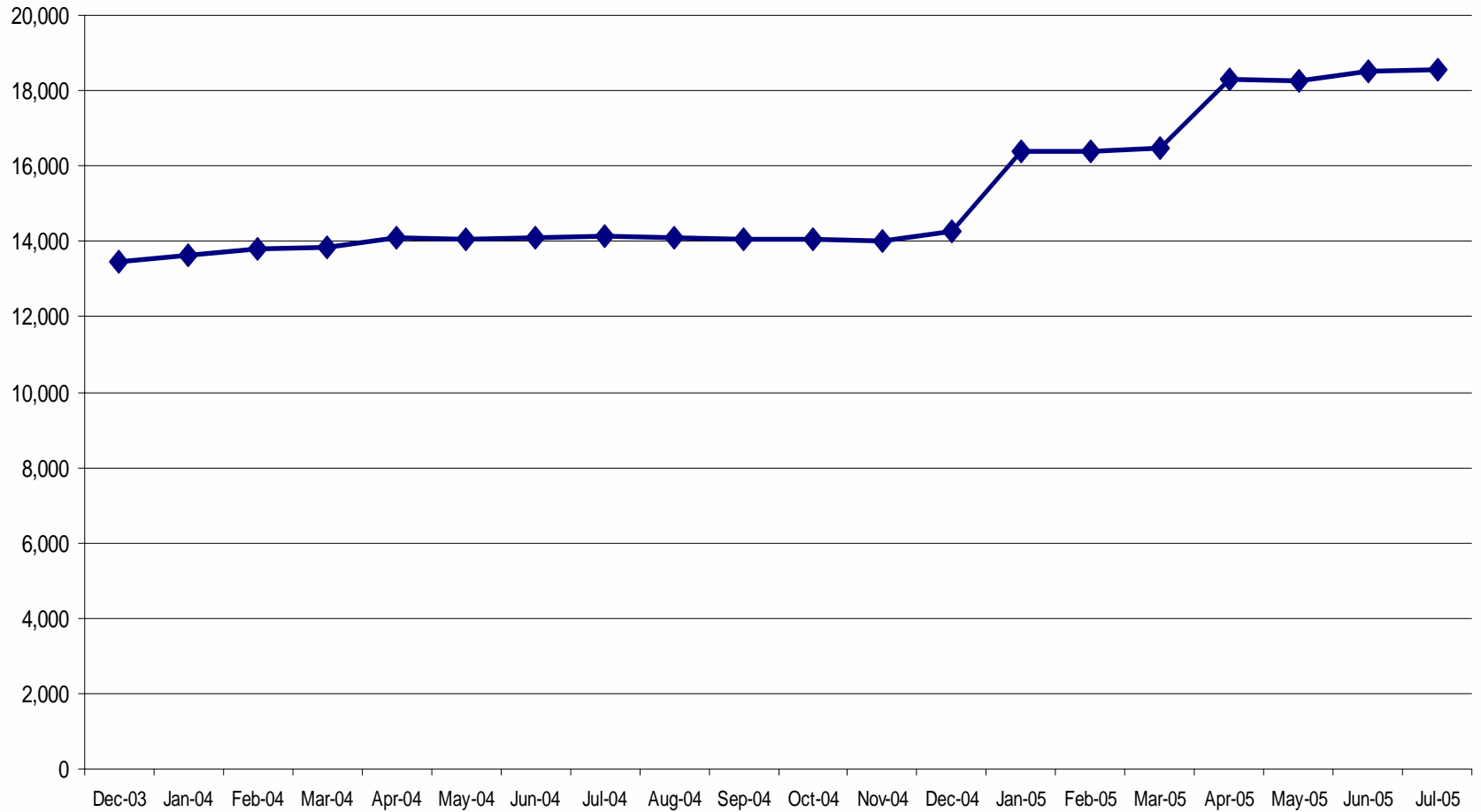
Vicki C. Grant, PhD, MSW
Vice President

NAPIPM
August 31, 2005

“While all changes do not lead to improvement, all improvement requires change.”

The Improvement Guide

Caseload



Accuracy of Decisions

Child or Adult

Eligible

Not Eligible

Determined
Eligible

(1)
Accurate Decision

(2)
Inaccurate Decision

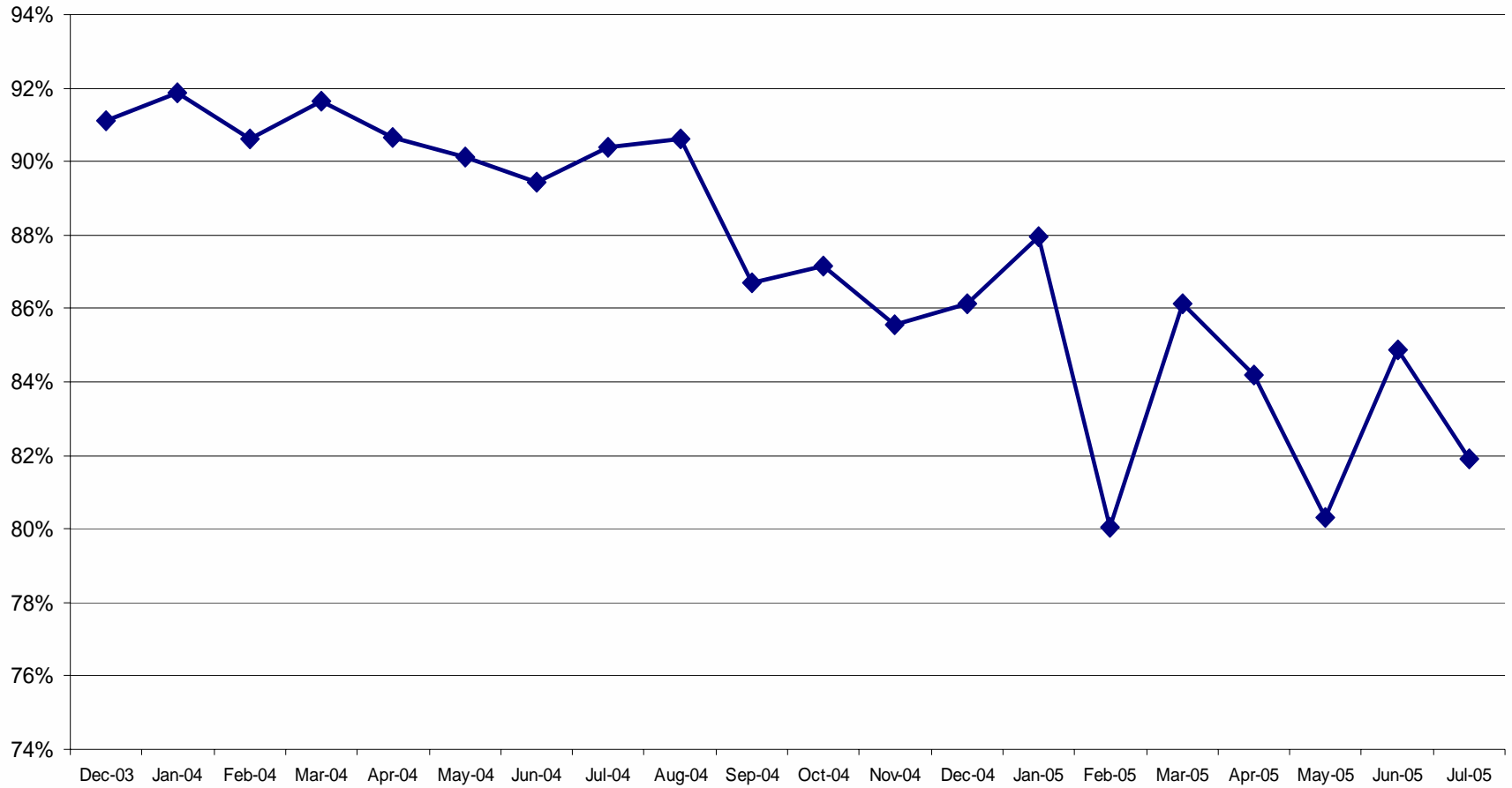
Office Decision

Determined
Not Eligible

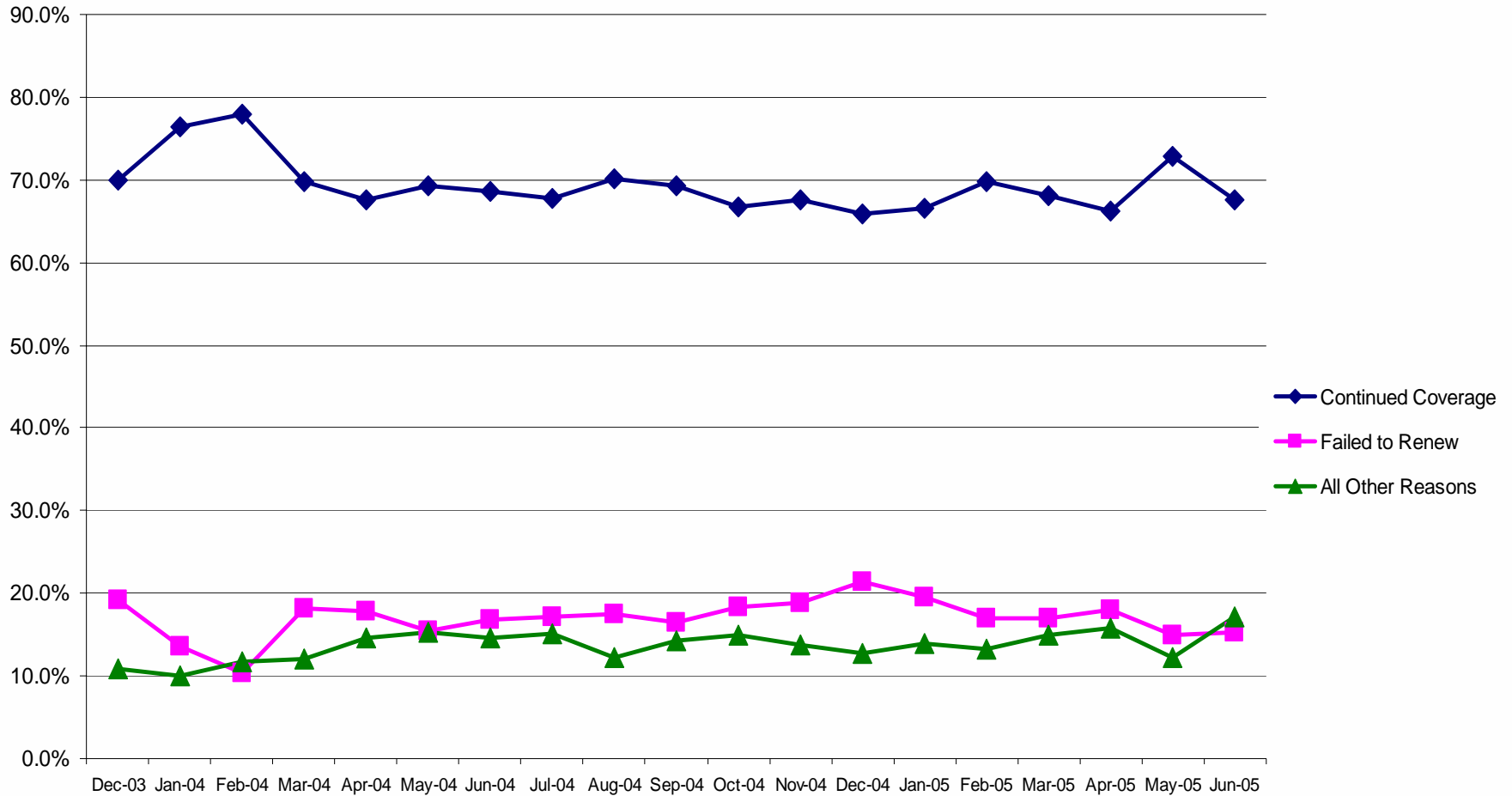
(3)
Inaccurate Decision

(4)
Accurate Decision

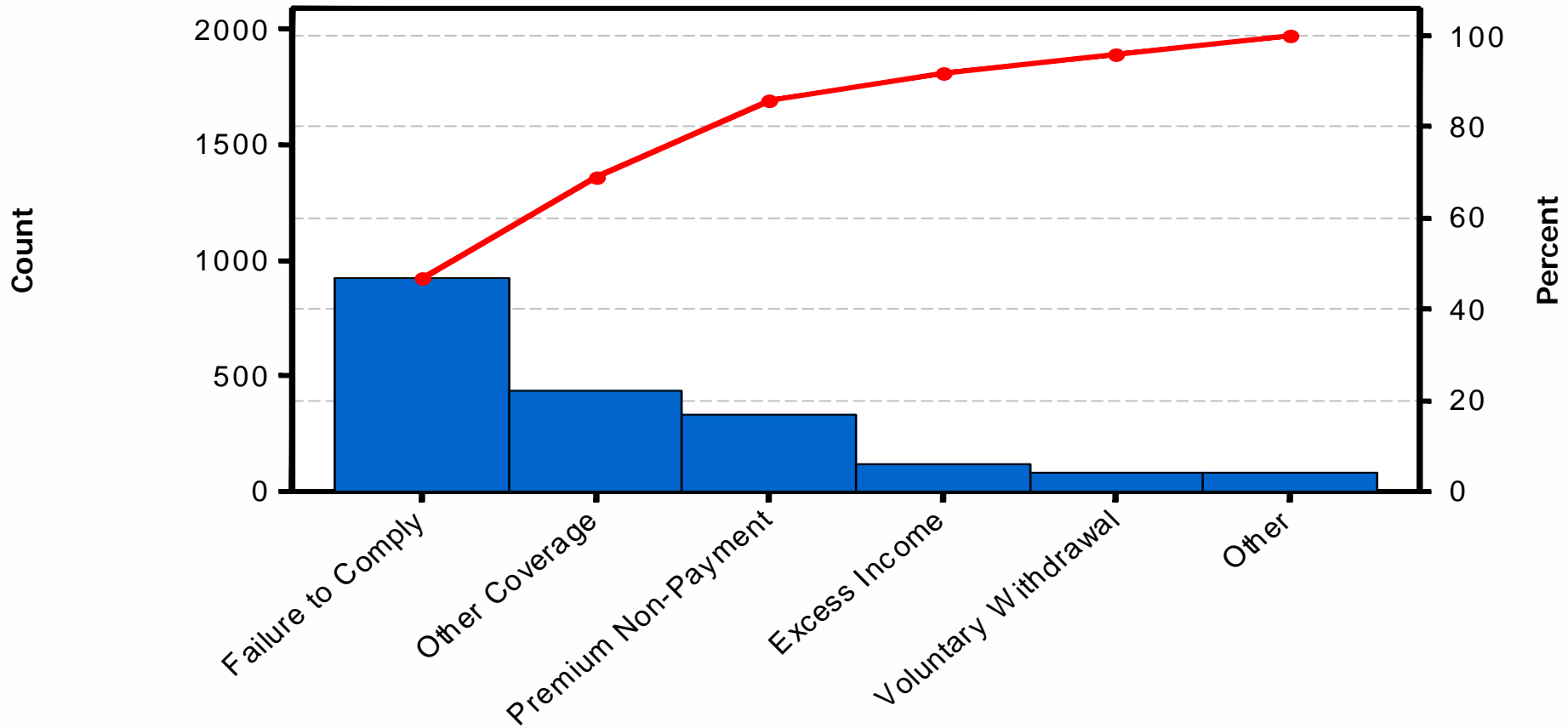
Applications Approved



Closed at Renewal

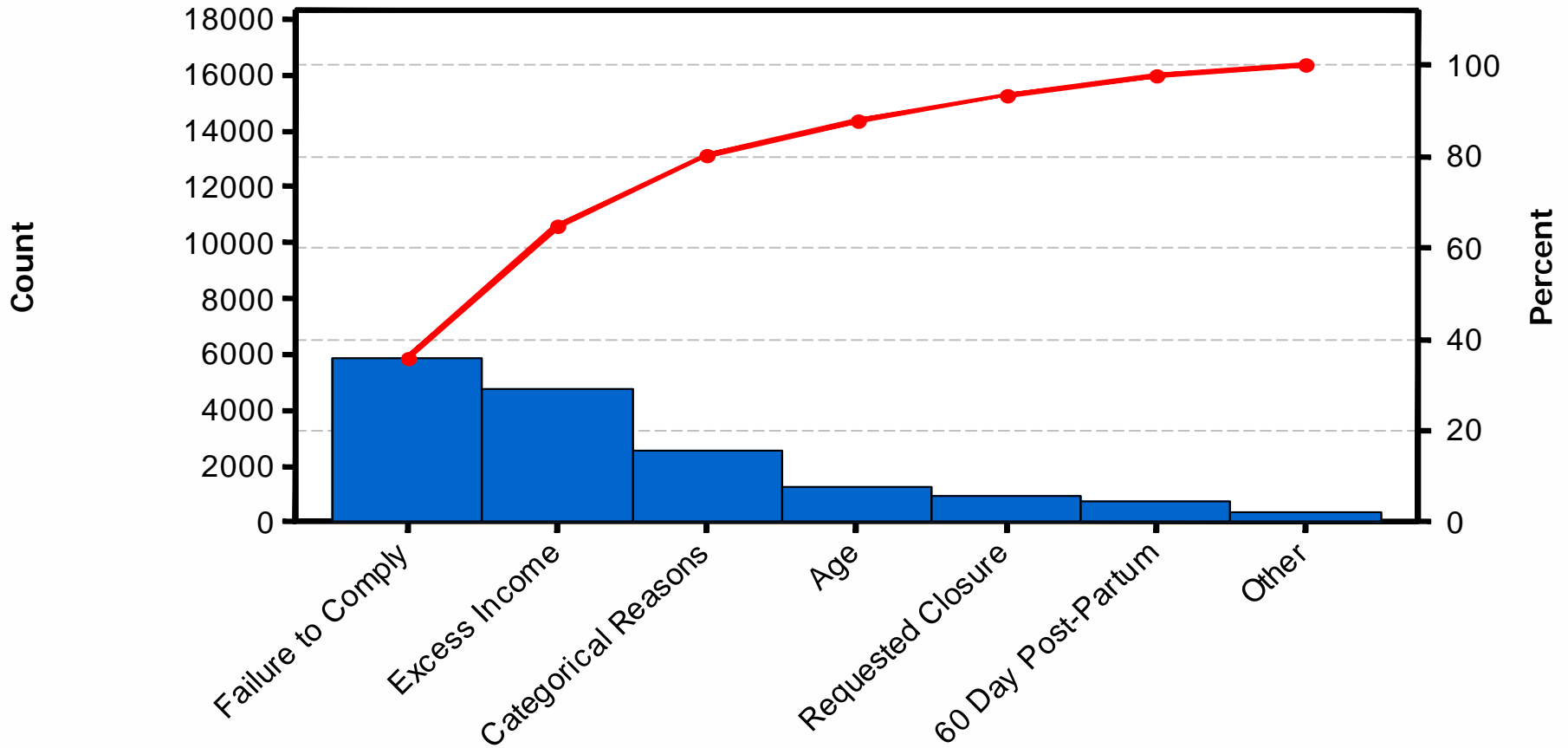


Pareto Chart of Denial Reasons



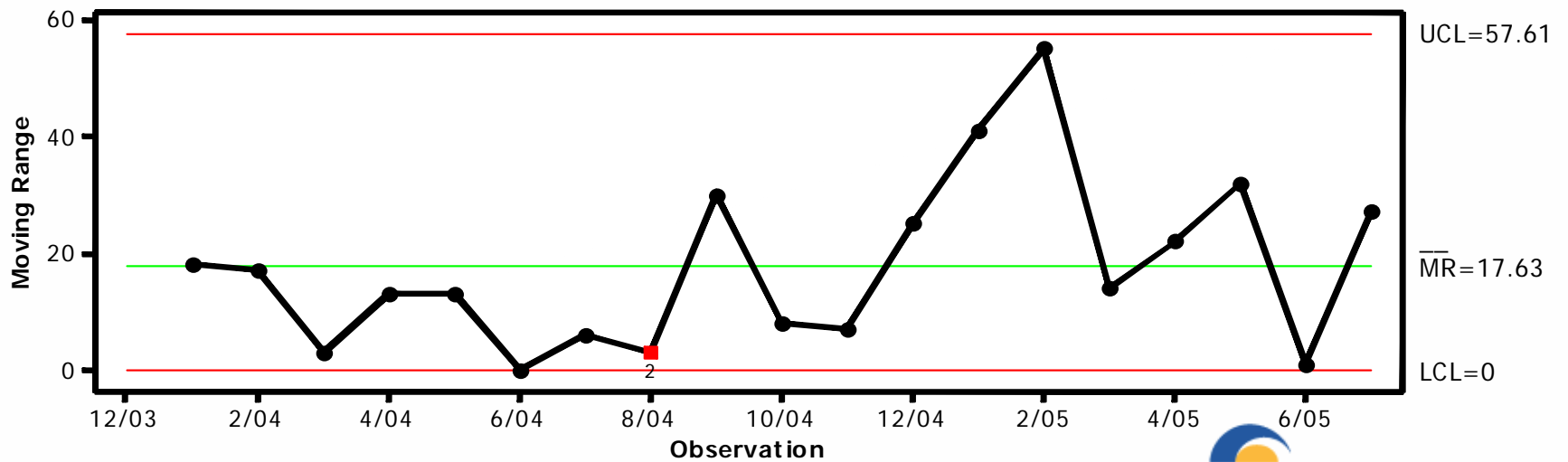
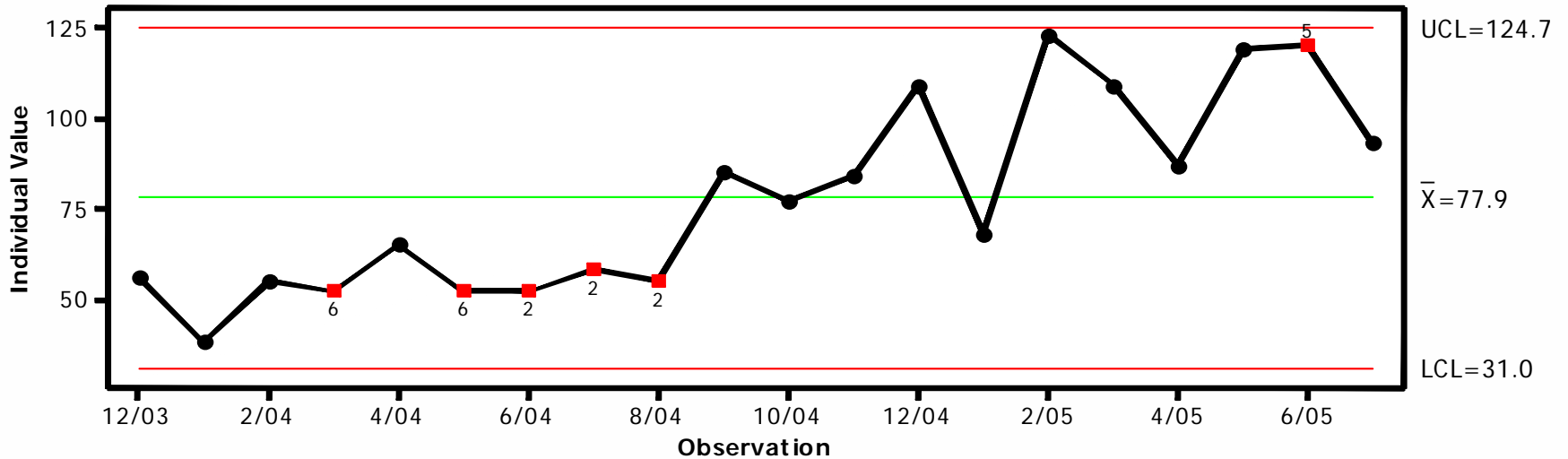
Count	921	436	331	119	83	81
Percent	46.7	22.1	16.8	6.0	4.2	4.1
Cum %	46.7	68.8	85.6	91.7	95.9	100.0

Pareto Chart of Closure Reasons

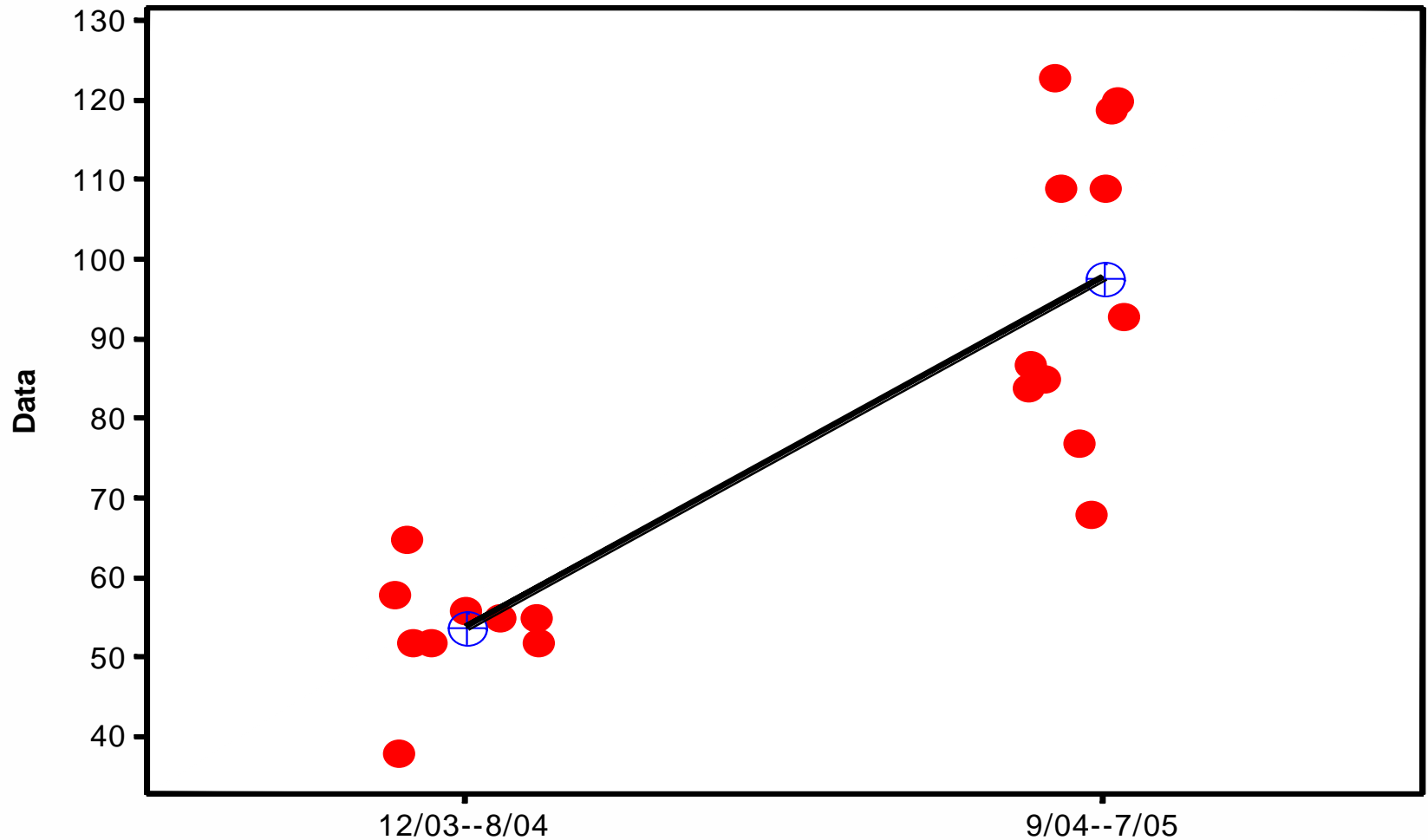


Count	5867	4724	2566	1220	927	698	353
Percent	35.9	28.9	15.7	7.5	5.7	4.3	2.2
Cum %	35.9	64.8	80.4	87.9	93.6	97.8	100.0

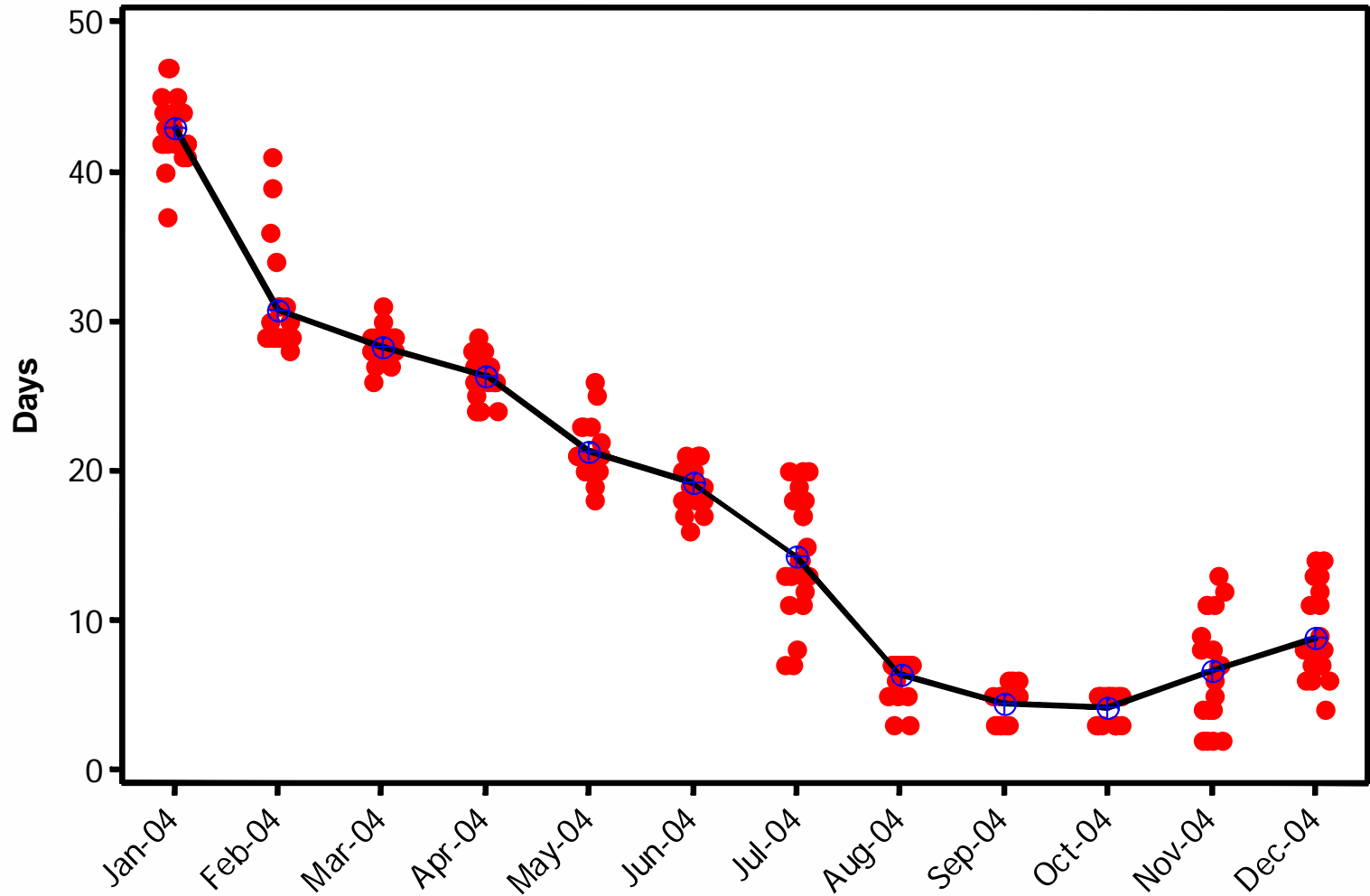
I-MR Chart of Denied



Individual Value Plot of Two Time Periods



Days to Process by Month, 2004



Why 99% Is Not Good Enough

(From The George Group)

- The “goodness level” of 99% equates to:
 - 20,000 lost articles of mail per hour
 - Unsafe drinking water almost 15 minutes each day
 - 5,000 incorrect surgical operations per week
 - 2 short or long landings at most major airports each day
 - 200,000 wrong drug prescriptions each year
 - No electricity for almost 7 hours per month

Six Sigma History

(From The George Group)

- Motorola was the first advocate in the 80's
- Six Sigma Black Belt methodology began in late 80's/early 90's
- More recently, other companies have embraced Six Sigma:
 - GE
 - Allied Signal
 - Bombardier
 - Sony

Origins of Lean Thinking

(From The George Group)

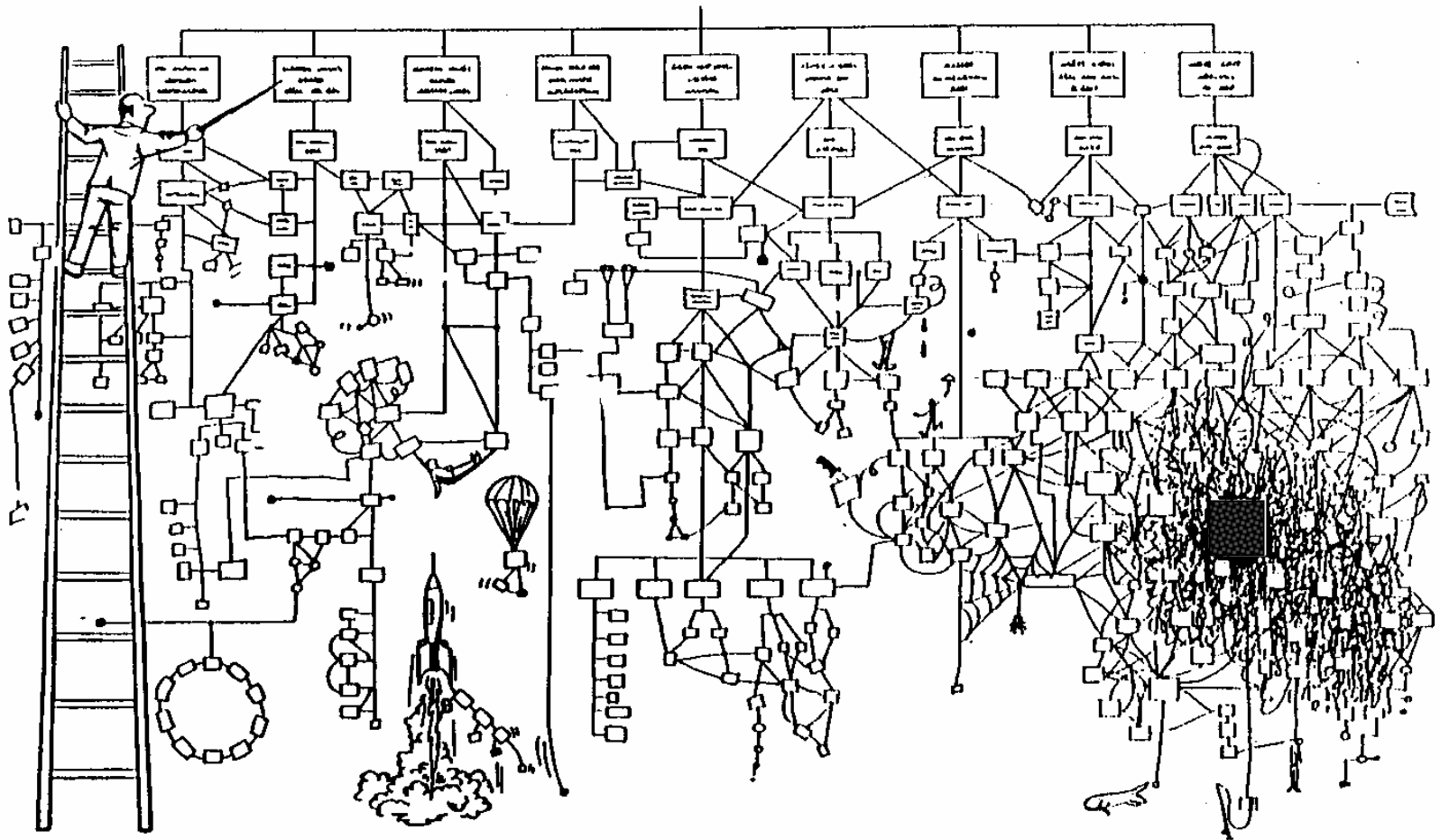
- **Lean has been around a long time:**
 - Pioneered by Ford in the early 1900's (33 hrs from iron ore to finished Model T, almost zero inventory but also zero flexibility!)
 - Perfected by Toyota post WWII (multiple models/colors/options, rapid setups, Kanban, mistake-proofing, almost zero inventory with maximum flexibility!)
- **Known by many names:**
 - Toyota Production System
 - Just-In-Time
 - Continuous Flow
- **Focused on reducing/eliminating the waste and cost in all processes**

The Seven Transactional Wastes

(From the George Group)

1. **Waste of Overproduction** – Preparing unneeded reports, reports not read or acted on, multiple copies in storage
2. **Waste of Time (Idle)** – Batch processing, i.e., monthly closings, weekly billing, monthly collection reports
3. **Waste in Transportation** – Unneeded steps, document/data travel distance
4. **Waste of Processing (Too Fast)** – Excessive sign-offs
5. **Waste of Stock on Hand (Inventory)** – Transactions waiting to be processed
6. **Waste of Movement (Worker)** – Unneeded data entry, extra steps
7. **Waste of Making Defective Products** – Incorrect data entry

The Process



Model for Improvement

Aim

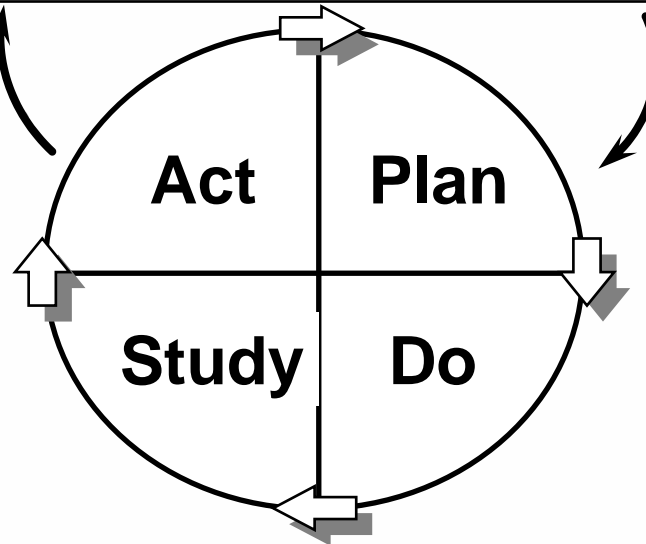
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Measurement

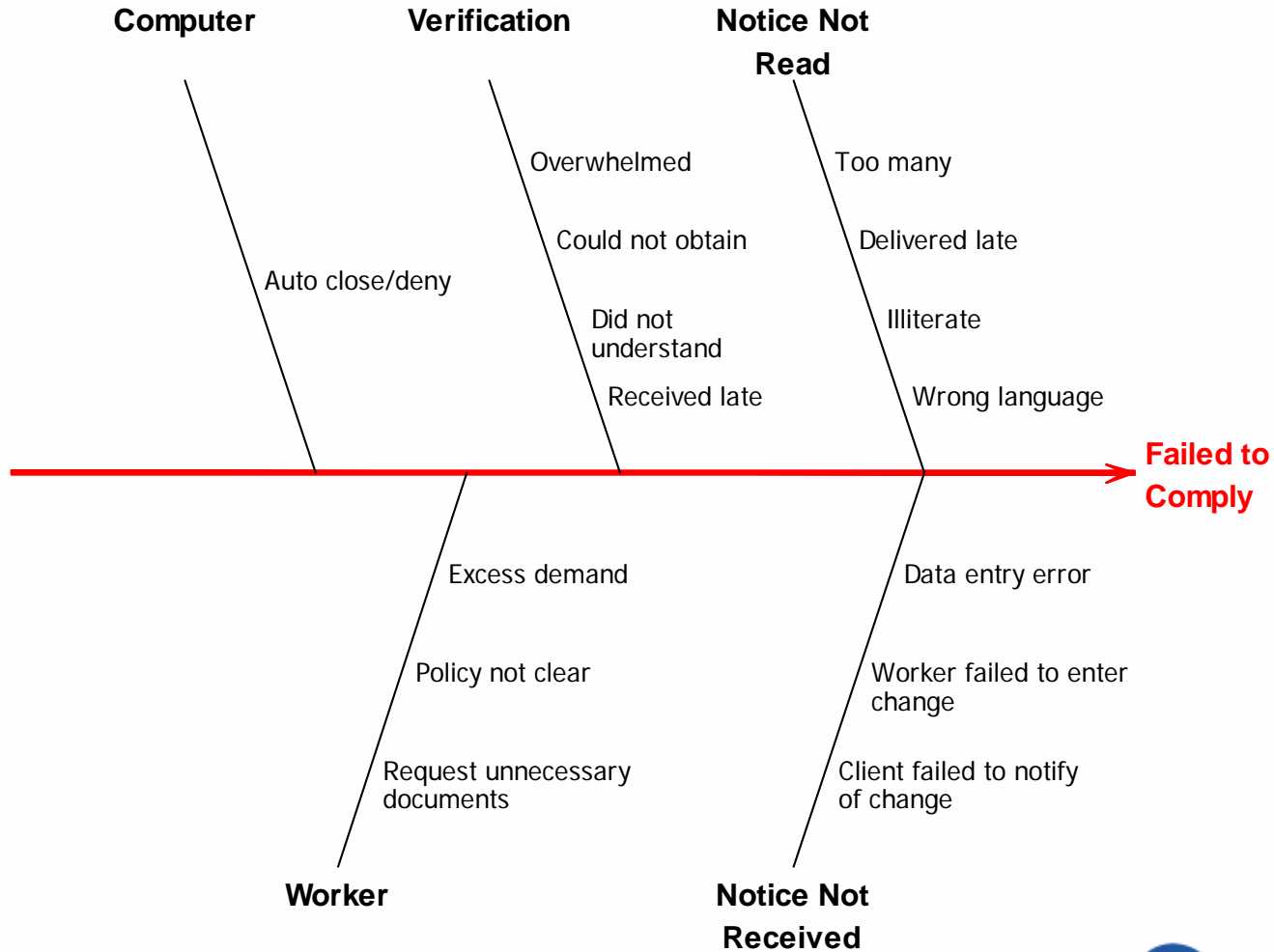
Cycle for Learning & Improvement



Determining the Scale of a Test

Confidence	Low Degree of Belief in Success	High Degree of Belief in Success
Consequences		
Failed Test Would Have Minor Consequences	Medium scale tests	One cycle to implement the change
Failed Test Would Have Major Consequences	Very small scale tests	Small-to-medium scale tests

Cause and Effect



Churning is Rework

Data and Case Reviews:

- 30% of closures reopened within 30 days
 - this becomes next month's work.
- 95% of closures reopened in a 6 month period
 - this is rework.
- 45% of closures statewide re-enroll within 12 months.

Ineffective Communication: Notices

- **Problem: System Generated Communication**
 - 24,000 clients received at least 1 official notice in the last 6 months
 - Average number of notices per client was 4.1 per day
 - Range of notices was 1 to 48 in a day
- **Solution: Change the Computer System**
 - 172,660 fewer pieces of paper
 - 43,165 fewer envelopes
 - Save 2 hours/day per worker by reducing inquiries about notices
 - Save 30 minutes/day per worker in researching notice and explaining

Ineffective Communication: Language Match

In a large county, the Spanish caseload retention rate increased by 34% when the annual redetermination form was changed to multilingual.

Ineffective Communication: Incorrect Addresses

Local office counted returned mail over three days:

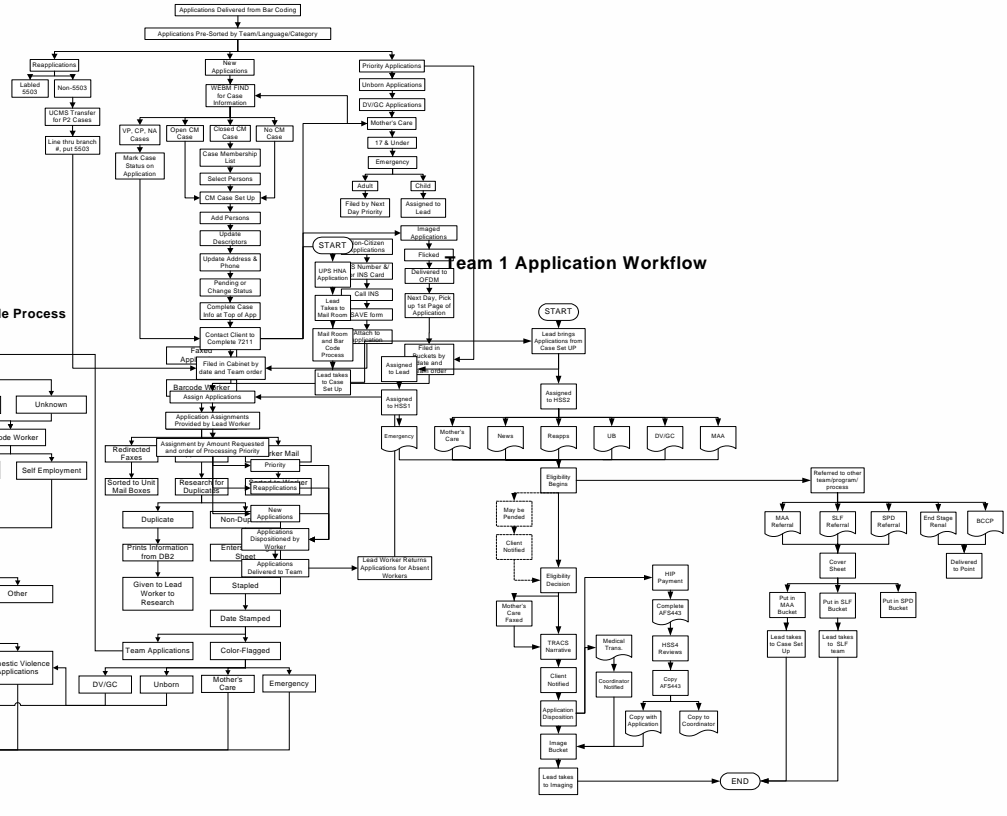
- Received 473 pieces of mail
- 228 pieces (48%) were returned by post office

Streamlining Work

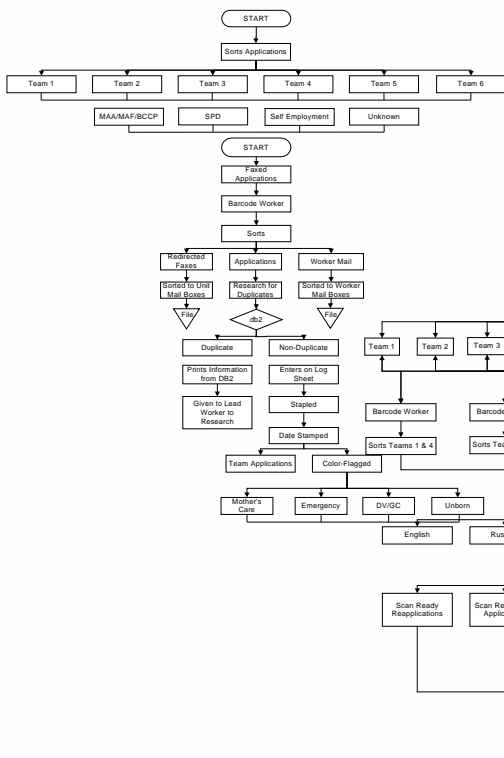
	BEFORE	AFTER
Processing Time	28 days	3 days
Wait Time	87.5%	14%
Eligibility Determination Time	40 min per app	18 min per app
Touches	72	16
Overtime Cost	\$27,000 monthly	\$0 monthly

One Office Went From This:

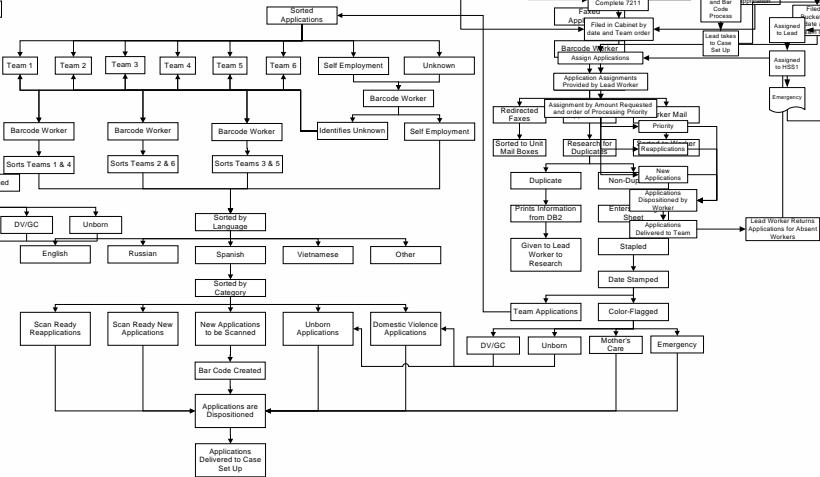
OHP Application / Case Set Up Process



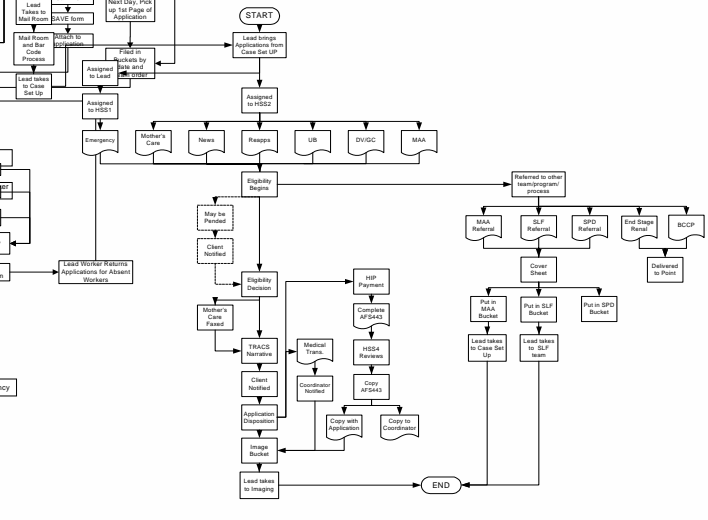
OHP Application / Mail Room Process



OHP Application / Bar Code Process

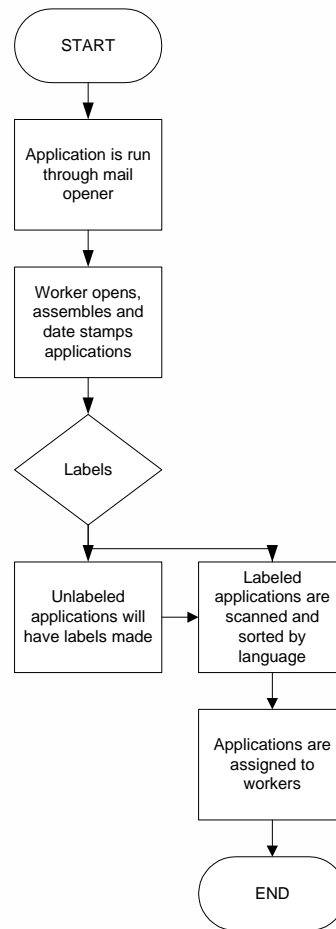


Team 1 Application Workflow



Expectation: A new flowchart

Proposed OHP Application Process



*“However beautiful the strategy,
you should occasionally look at
the results.”*

-Sir Winston Churchill